

2Mbj

l: A dry surface treating apparatus comprising, within a treating chamber, a surface-treating material supply section and a tubular barrel having a porous peripheral surface for accommodating a work piece, to treat a surface of the work piece while rotating said tubular barrel horizontally arranged about a horizontal rotational axis, wherein said tubular barrel has a slide stop for stopping a slide of the accommodated work piece along an inner peripheral surface of said tubular barrel due to rotation of said tubular barrel.

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2. An apparatus according to claim 1, wherein said tubular barrel is in a vertical sectional form with respect to the rotational axis having at least one corner at an internal angle of 30° to 100°, said corner being provided as said slide stop.

- 3. An apparatus according to claim 2, wherein said tubular barrel is in a vertical sectional polygonal form with respect to the rotational axis having at least three corners at internal angles of 30° to 100°, said corners being provided as said slide stops.
- 4. An apparatus according to claim 3, wherein said tubular barrel is in a vertical sectional form of a regular triangle with respect to the rotational axis.

5. An apparatus according to claim 3, wherein said tubular barrel is in a vertical sectional form of a square with respect to the rotational axis.

- 6. An apparatus according to claim 2, wherein said tubular barrel is in a vertical sectional form of a rhombus with respect to the rotational axis.
- 7. An apparatus according to claim 1, wherein said tubular barrel is in a vertical sectional form of a convex-formed curve in a part thereof with respect to the rotational axis.
- 8. An apparatus according to claim 7, wherein said tubular barrel is in a vertical sectional form of an ellipse or convex-formed lens with respect to the rotational axis.
- 9. An apparatus according to claim 1, wherein a protrusion is provided on an inner peripheral surface of said tubular barrel, said protrusion being made as said slide stop.
- protrusion is provided at an angle of 30° to 100° to a tangential line on a forward side of rotation in the vertical sectional form with respect to the rotational axis of said tubular barrel.

protrusion is in any of a comb form, a plate form and rod form.

- 12. An apparatus according to claim 9, wherein said protrusion is provided one to seven in the number.
- 13. An apparatus according to claim 1, wherein said tubular barrel has an interior comprising a plurality of partitioned accommodating sections formed by division into 7 two or more by partitioning members provided vertical to the rotational axis of said tubular barrel.
- 14. An apparatus according to claim 13, wherein said partitioning member is in a porous form structured by a linear member.
- 15. An apparatus according to claim 1, wherein said tubular barrel has an interior comprising a plurality of partitioned chambers formed by dividing into two or more the vertical sectional form with respect to the rotational axis of said tubular barrel.
- 16. An apparatus according to claim 15, wherein said partitioned chamber is in a vertical sectional form with respect to the rotational axis having at least one corner at an internal angle of 30° to 100°, said corner being provided as said slide stop.
- 17. An apparatus according to claim 13 or 15, wherein work pieces are accommodated in said partitioned

accommodating sections and/or partitioned chambers on a one-to-one basis.

- 18. An apparatus according to claim 1, wherein said porous peripheral surface is a mesh-formed peripheral surface.
- 19. An apparatus according to claim 1, wherein said porous peripheral surface is a slit-formed peripheral surface.
- 20. An apparatus according to claim 1, wherein said tubular barrels in plurality are annularly supported at a circumferential outward of the rotational axis of a support member rotatable about the rotational axis in a horizontal direction.
- 21. An apparatus according to claim 1, wherein said dry surface treating apparatus is a deposition apparatus.
  - 22. An apparatus according to claim 1, wherein said dry surface treating apparatus is a blast treating apparatus.
- piece by using said dry surface treating method for treating a work according to claim 1.
  - 24. A dry surface treating method according to claim 23, wherein said work piece is a rare earth metal-based permanent magnet in a plate or bow form.

25. A dry surface treating method according to claim 23, wherein said work piece is treated while being inverted of surfaces at said slide stop as a fulcrum.

26. A rare earth metal-based permanent magnet having been surface-treated by said dry surface treating method according to claim 23.

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